WO 99/64593 PCT/US99/12906

What is claimed is:

15

25

A substantially purified polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, and fragments thereof.

- 2. A substantially purified variant having at least 90% amino acid identity to the amino acid sequence of claim 1.
- 10 3. An isolated and purified polynucleotide encoding the polypeptide of claim 1.
  - 4. An isolated and purified polynucleotide variant having at least 90% polynucleotide sequence identity to the polynucleotide of claim 3.
  - 5. An isolated and purified polynucleotide which hybridizes under stringent conditions to the polynucleotide of claim 3.
- 6. An isolated and purified polynucleotide having a sequence which is complementary to the polynucleotide sequence of claim 3.
  - 7. An isolated and purified polynucleotide comprising a polynucleotide sequence selected from the group consisting of SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, and fragments thereof.
  - 8. An isolated and purified polynucleotide variant having at least 90% polynucleotide sequence identity to the polynucleotide of claim 7.
- 9. An isolated and purified polynucleotide having a sequence which is complementary to the polynucleotide of claim 7.

WO 99/64593 PCT/US99/12906

10. An expression vector comprising at least a fragment of the polynucleotide of claim 3

11. A host cell comprising the expression vector of claim 10.

5

- 12. A method for producing a polypeptide comprising the amino acid sequence selected from the group consisting of SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:4, SEQ ID NO:5, and fragments thereof, the method comprising the steps of:
- a) culturing the host cell of claim 11 under conditions suitable for the expression of the polypeptide; and
  - b) recovering the polypeptide from the host cell culture.
  - 13. A pharmaceutical composition comprising the polypeptide of claim 1 in conjunction with a suitable pharmaceutical carrier.

15

- 14. A purified antibody which specifically binds to the polypeptide of claim 1.
- 15. A purified agonist of the polypeptide of claim 1.

20

16. A purified antagonist of the polypeptide of claim 1.

-

17. A method for treating or preventing a cell proliferation disorder, the method comprising administering to a subject in need of such treatment an effective amount of the pharmaceutical composition of claim 13.

25

- 18. A method for treating or preventing a cell proliferation disorder, the method comprising administering to a subject in need of such treatment an effective amount of the antagonist of claim 16.
- 30 19. A method for stimulating cell proliferation, the method comprising administering to a cell an effective amount of the pharmaceutical composition of claim 13.

WO 99/64593 PCT/US99/12906

A method for treating or preventing an immune disorder, the method comprising administering to a subject in need of such treatment an effective amount of the antagonist of claim 16.

- A method for treating or preventing an immune disorder, the method comprising administering to a subject in need of such treatment an effective amount of the pharmaceutical composition of claim 13.
- 22. A method for detecting a polynucleotide encoding the polypeptide

  10 comprising the amino acid sequence selected from the group consisting of SEQ ID NO:1,

  SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, and fragments thereof in a

  biological sample, the method comprising the steps of:
  - (a) hybridizing the polynocleotide of claim 6 to at least one of the nucleic acids in the biological sample, thereby forming a hybridization complex; and
  - (b) detecting the hybridization complex, wherein the presence of the hybridization complex correlates with the presence of the polynucleotide encoding the polypeptide in the biological sample.
- 23. The method of claim 22 wherein the nucleic acids of the biological sample are amplified by the polymerase chain reaction prior to hybridization.



15